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Vertical Restraints and Antitrust Policy

Richard A. Posner†

Antitrust policy toward vertical restraints is the biggest *substantive* issue facing antitrust. (The biggest procedural/institutional/administrative issue is overlapping enforcement authority—federal, state, and foreign, especially EU.) The Justice Department’s suit against Microsoft put the issue on the map. I shall touch on exclusive dealing, tying, bundling, and loyalty rebates, but I warn the reader that the touch will in places be quite light.

I want to begin by correcting the widespread impression that the issue of what if anything to do about vertical practices is an issue between the Chicago school of antitrust policy and the so-called post-Chicago school in any but an historical sense. The possibility that vertical practices, or as I would prefer to call them unilateral abuses of market power, can reduce economic welfare was recognized almost half a century ago by Aaron Director (the doyen of Chicago antitrust thinking) and Edward Levi in their discussion of the *Standard Fashion* case.¹

Neither the Supreme Court’s opinion nor Director and Levi’s discussion of the case goes deeply into its actual facts, so the summary that follows is better regarded as a hypothetical than as a true account of economic history. *Standard Fashion* manufactured a popular line of dress patterns that women could use to make their own dresses. So popular was its line that “dry goods” stores (stores that sold bolts of cloth for making clothing) wanted very much to be able to sell it. They would therefore be inclined to agree to carry *Standard Fashion*’s line exclusively. Competing manufacturers of dress patterns could, in principle, have created their own retail outlets, but who would shop there if the most popular brand could not be found? Competing manufacturers would have had to create a line as long and as popular as *Standard Fashion*’s line, and that may have been very costly to do.

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¹ *Standard Fashion Co v Magrane-Houston Co*, 258 US 346 (1922). See Aaron Director and Edward H. Levi, *Law and the Future: Trade Regulation*, 51 Nw U L Rev 281, 293 (1956). *Standard Fashion* was a Clayton Act § 3 rather than a Sherman Act § 2 case, but that is (or ought to be) a distinction without a difference.

What distinguished *Standard Fashion* from a garden-variety exclusive dealing case was the existence of economies of scope at the distribution level. Consumers didn't want to traipse from store to store. They wanted a full line in each store. So any manufacturer entering the dress patterns business would have to provide the full line if it was excluded from stores that carried the dominant firm's line. This may seem a surprising suggestion given the existence of department stores, which carry the products of many producers, most of whom don't offer a full line of products. One can imagine a number of designers of women's dress patterns, each specializing in one pattern, and the department store assembling them into a full line to compete with *Standard Fashion's* full line. However, it appears that in 1914, when the exclusive dealing contract at issue in the case was signed,² not only did many smaller communities lack department stores,³ but unlike dry goods stores department stores catered to women who wanted to buy ready-made clothes rather than make their own clothes.⁴

Restricting its retailers must have cost *Standard Fashion* something. But maybe less than the increase in its profits from forestalling new entry by compelling prospective entrants to enter on a full-line basis. The point is not that the new entrant would have to invest more capital but that it would have to embark on a riskier and hence costlier undertaking, that of creating not a single successful product but a whole line of such products. (*Standard Fashion* claimed that a retailer should carry "at least two sizes of nearly all the styles"—and there were 1200 styles available at any given time, with 60 being added every month.)⁵ It is as if one weren't permitted to make commercial aircraft without making military aircraft as well.

But the fact that exclusionary conduct is not costless to the firm engaging in it highlights a general and significant difference between horizontal and vertical restraints. When two competing firms agree to fix prices or to merge, it is easy to see how both are better off and (unless the merger generates significant efficiencies) consumers are worse off. Not that collusion or merger involves no transaction costs, but the benefits are highly likely to exceed those costs because the

² See Transcript of Record, Opening Statement by Robert G. Dodge, *Standard Fashion Co v Magrane-Houston Co*, No 552, *28 (S Ct filed Mar 13, 1918).

³ See H. Pasdermajian, *The Department Store: Its Origins, Evolution and Economics* 36 (Newman 1954).

⁴ See William R. Leach, *Transformations in a Culture of Consumption: Women and Department Stores, 1890-1925*, 71 *J Am Hist* 319, 327 (1984).

⁵ Petition for a Writ of Certiorari to the United States Circuit Court of Appeals for the First Circuit, *Standard Fashion Co v Magrane-Houston Co*, No 552, *23 (S Ct filed Sept 27, 1919).

deal has a “win-win” character. But when a firm imposes a cost on its dealers or other customers, and therefore has to compensate them and so incurs a higher cost itself, it is difficult to see how the arrangement will generate a net benefit for the firm. It is that difficulty that made the Chicago school skeptical about vertical restraints, notwithstanding its recognition that *Standard Fashion* may have been a case in which a vertical restraint was a rational anticompetitive practice. The Chicago school’s skepticism was heightened by the economically dubious arguments commonly made to support the condemnation of vertical restraints, such as the leverage theory of tying or the proposition that imperfections in the capital market would prevent a new entrant from financing entry on reasonable terms.

It is only recently that antitrust scholars have begun to establish systematically the conditions that sometimes make vertical restraints rational methods of maximizing profits by reducing competition.⁶ To the extent that these scholars are persuasive, their findings are consistent with the fundamental premise of the Chicago school—revolutionary when first declared—that antitrust issues should be analyzed on the assumption that business firms are rational profit maximizers, so that the standard theorems of price theory can be used to predict the competitive effects of a challenged transaction.

An important implication of this approach with respect to vertical restraints is that, precisely because they are costly to a firm imposing them unless they benefit the dealer or distributor, only a firm whose monopoly is fragile—that is, vulnerable to new entry—will impose vertical restraints to exclude competition. This point was missed in Robert Bork’s criticism of the *Standard Fashion* decision.⁷ He argued that *Standard Fashion* couldn’t extract a monopoly price from its dealers twice, first by charging them what the market would bear and then by forcing them to enter into exclusive dealing contracts. That is true—and is one of the Chicago school’s original criticisms of antitrust policy toward vertical restraints. But what *Standard Fashion* may have been able to do was increase the duration of its monopoly, which might have collapsed sooner otherwise. Bork also criticizes the decision on the ground that *Standard Fashion* did not actually have a monopoly; its share of the patterns market was only 40 percent. But that was its nationwide share, and the Supreme Court pointed out that in

⁶ The literature is now extensive. See, for example, Dennis W. Carlton and Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 RAND J Econ 194 (2002); Dennis W. Carlton, *A General Analysis of Exclusionary Conduct and Refusal to Deal—Why Aspen and Kodak Are Misguided*, 68 Antitrust L J 659 (2001).

⁷ Robert H. Bork, *The Antitrust Paradox: A Policy at War with Itself* 305–07 (Free Press 2d ed 1993).

many small towns Standard Fashion probably was the only supplier of patterns.⁸ And it was small towns that were least likely to have department stores.

The likelihood that monopoly profits obtained during the extension period (as I'll call the period for which a monopoly is extended by means of exclusionary practices) will exceed the costs of the exclusionary practice to the monopolist is enhanced if, as in *Standard Fashion*, the monopoly is of intellectual property. Remember that the company was selling dress patterns, not the dresses themselves. Intellectual property often exhibits a yawning gap between average and marginal cost. In the extreme case, which is approximated in some software markets, marginal cost is close to zero. This means that almost all the revenues earned by a firm that monopolizes the market go directly to the bottom line if it has already recovered its fixed costs, or, if it has not, to pay off those costs. The gap between price and marginal cost makes it entirely plausible that the gain from extending the monopoly another year or two will exceed the cost of the exclusionary practices required to obtain the extension. Standard Fashion probably incurred most of its costs in creating the dress patterns, and once they were created and the costs of creating them thus were sunk, the marginal cost of additional copies may have been slight, making each additional sale highly profitable.

This suggests, however, an alternative, nonmonopolistic reason for Standard Fashion's exclusive dealing contracts. Unless its dress patterns were copyrightable, imitators could produce cheap copies and retailers could offer them to the consuming public side by side with Standard Fashion's originals, but at a lower price attractive to many consumers. This would make it difficult for Standard to recover its sunk costs of creating the patterns. This rationale for exclusive dealing is nonmonopolistic, although it limits competition in the short run, because to the extent that it merely enables Standard to internalize the benefits of its upfront investment it does not reduce economic efficiency. However, the qualification in "merely" is important, as we'll see shortly.

The point particularly to be emphasized is that the cost of an exclusionary practice, especially in intellectual property markets, need not always exceed the additional monopoly profits that the practice makes possible. This is so, incidentally, even though that cost may have been incurred before the additional sales that it enabled, which would require discounting any profits from those sales to present value before comparing them to the cost.

⁸ *Standard Fashion*, 258 US at 357.

But reference to fragile monopolies and to intellectual property highlights the complicating consideration that I touched on in suggesting an alternative, nonmonopolistic rationale for Standard Fashion's exclusive dealing. A monopoly might be fragile because it had been obtained by investment in an innovation (it could be a novel and attractive dress pattern) that, once created, could be cheaply imitated. That is one of the situations in which marginal cost is likely to lie below average total cost. The cost of creating the innovation is incurred before production begins but must be recouped, if at all, by the price charged per unit of output. If the cost of production is low, copiers will be able to undersell the innovator at a profit. This is not quite so attractive a tactic as it seems, because to defend its position the existing market occupant may price down to marginal cost and thus make new entry unprofitable. Nevertheless, if entry into an innovator's monopoly market is feasible, the return to innovation will be less. This is the basic rationale of intellectual property rights. If those rights are thought to be too narrowly defined, there is an argument for allowing innovators to use contracts with their customers to obtain additional monopoly protection, as apparently Standard Fashion was doing. My own view, however, is that at present intellectual property rights are too broadly rather than too narrowly defined. Although economists continue to believe that the social return to research and development exceeds the private return, the attempt to equalize those returns through relentless expansion of intellectual property rights is probably a mistake because of the heavy licensing costs that are imposed when areas of research and development are blanketed by thickets of patents and copyrights.⁹

Exclusive dealing, the specific practice in *Standard Fashion*, is analytically the same as tying, and so what I have said about that case covers exclusionary tying cases as well. Exclusive dealing ties distribution to manufacturing; equivalently, tying is exclusive dealing in the tied product. So all we need is sensible law on exclusive dealing in order to be able to deal sensibly with tying cases (at least *contractual* tying cases, as distinct from *technological* tying cases, where the tied product is physically integrated with the tying product—such cases present particularly acute evidentiary and remedial difficulties). In fact, the rules should be identical (again with a possible exception for technological tying). Suppose that the tying and the tied products are complements, such as a hammer and nails, and that there are economies of scale in the manufacture or sale of the tied product, corre-

⁹ This is a theme in William M. Landes and Richard A. Posner, *The Economic Structure of Intellectual Property Law* (Harvard 2003).

sponding to the economies of scope in distribution that I have argued is the key to understanding *Standard Fashion* as a case that may have involved a genuinely exclusionary practice. A firm that wants to enter the market for the tying product, but because of the tying arrangement is denied access to existing producers of the tied product (they are owned, or contractually controlled, by the monopoly producer of the tying product, who will permit the sale of nails only to the purchasers of his hammers), will have to produce the tied product as well because of the complementarity I mentioned; no one will buy a hammer if he can't buy nails as well. And so the new entrant will have higher costs than the incumbent because, as a newcomer, it will not be able to achieve the incumbent's economies of scale. In contrast, if nails are produced by an independent firm, the price per nail will be the same (barring quantity or volume discounts) to small as to large buyers. So the tie-in, by forcing the newcomer to make nails, will reduce its expected gain from entering the market for the tying product.

This is not the old "leverage" theory, the theory that a tie-in is intended to give a monopolist a second source of monopoly profits—the sale of nails at a monopoly price. The tie-in is intended rather to protect the first monopoly. Nor is the theory that it is difficult, because of capital market problems, to obtain the additional capital needed to enter two markets rather than one. Rather, the analysis turns on the assumption that there are economies of scale in the manufacture of the tied product, so that the prospective entrant if he manufactures it himself will incur higher costs than if he bought it on the open market. The analysis also depends, as before, on the assumption that the monopolist's monopoly is insecure, so that it pays him to incur some costs to prevent new entry.

Bundling is analytically similar to tying. In bundling, the "tied" product is given away, which means that in effect the seller is paying the buyer to buy it, whereas in tying, the buyer is forced to buy the tied product as a condition of obtaining the tying product. So it looks like carrot versus stick but really it's two carrots, since a seller cannot actually force people to do anything. Bundling is the equivalent of offering a discount off the price of the tying product. But tying is the same. To induce the buyer to buy an unwanted extra (if it's wanted, there is no need for a tie) or a wanted extra at a supracompetitive price (the case when tying is used as a method of price discrimination, because then the price of the tying product is in effect transferred to the normally cheap tied product), the seller must offer a better deal on the tying product than he would otherwise have to do. He might, for example, in a case in which the tied product was the device for extracting consumer surplus, give away the tying product.

The usual purpose of bundling, as of tying, is price discrimination. Suppose (to take an old example of George Stigler's) that a firm sells two products, X and Y, that are worth different amounts to different customers. Assume that the firm has two customers for these products, A and B, and A would pay \$8,000 for X and \$2,500 for Y while B would pay \$7,000 for X and \$3,000 for Y. If the firm were to price X and Y separately, its best price for X would be \$7,000 and for Y \$2,500, and so its total revenue would be \$19,000. If it sells X and Y as a package, however, it can charge \$10,000 for the package and thus obtain a total revenue of \$20,000; the package is worth more than \$10,000 to both A and B because of the value that each places on one of the items in the package.¹⁰ When the products are priced separately, the price is depressed by the buyer who values the product less; the bundling eliminates this effect. A is the low-elasticity demander of X, B the low-elasticity demander of Y; bundling enables the seller to discriminate against A with respect to X and B with respect to Y while charging them the same price so that arbitrage is prevented.

The profitability of bundling is greater, the more products that can be bundled.¹¹ For this makes it more likely that the package will contain products for which different consumers have different elasticities of demand, as in the numerical example, where A values X more than B does, while B values Y more than A does.

The effect of price discrimination on economic welfare may be generally negative, though no stronger statement is possible and it is necessary in evaluating that effect to distinguish between two types of discrimination, what the economics literature confusingly refers to as "third degree" and "second degree" price discrimination.¹² In third-degree price discrimination, the customers are segmented according to their elasticity of demand and a separate price is charged to each seg-

¹⁰ See George J. Stigler, *A Note on Block Booking*, in George J. Stigler, ed, *The Organization of Industry* 165 (Chicago 1983). See also William James Adams and Janet L. Yellen, *Commodity Bundling and the Burden of Monopoly*, 90 Q J Econ 475 (1976). An alternative explanation of block booking in the film industry is presented in Roy W. Kenney and Benjamin Klein, *The Economics of Block Booking*, 26 J L & Econ 497 (1983). Their explanation is unrelated to monopoly or discrimination, but instead emphasizes transaction cost savings and optimization of marginal incentives.

¹¹ See Yannis Bakos and Erik Brynjolfsson, *Bundling and Competition on the Internet*, 19 Marketing Sci 63 (2000).

¹² For an excellent analysis, see Benjamin Klein and John Shepard Wiley Jr., *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal*, 70 Antitrust L J 599, 612-15 (2003). "First degree" price discrimination is perfect price discrimination, and is infeasible; in perfect price discrimination price varies with the elasticity of demand of each potential customer for each quantity demanded, and as a result the seller never turns away a customer willing to pay at least the marginal cost of supplying him. The output under perfect price discrimination is therefore the competitive output.

ment. As a result, some customers are charged more than in a single-price system, others less, and the net effect on output is on average neutral.¹³ Given that output is not (on average) higher, the costs of implementing third-degree price discrimination, which involve obtaining information on the elasticities of demand of different types of customer, setting different prices, and preventing arbitrage (that is, resale by customers charged lower prices to customers charged higher prices), are a deadweight loss; in addition, if the product is an input into the customers' businesses (rather than a consumer product), different prices to competing customers will distort competition at their level. In second-degree price discrimination, which is illustrated by tying and by bundling, a single price is charged that varies with (presumed) elasticity. For example, if the monopolist of hammers controls the supply of nails and "licenses" the use of his hammers at a price determined by how many nails the licensee uses, he will be charging a higher total price to customers who value hammering more. There are still costs of implementing the discriminatory scheme—and in fact they may be high; perhaps the monopolist will redesign his hammer so that it works only with the nails that he supplies. There is a greater likelihood that these costs will be offset by an increase in output than in the case of third-degree price discrimination, but it is not even certain that there will *be* an increase in output. Elasticity of demand may well be correlated with amount of use, but surely not perfectly; large users may for example have a greater ability than small ones to arrange for substitutes for the monopolized product.

Even in the case of second-degree price discrimination, the fact that the net effect on economic welfare is probably negative would not be a persuasive ground for forbidding such discrimination. Such a project would be quixotic at best, if only because of the difficulty for courts of distinguishing between cost-based and purely discriminatory price differences. But that is an aside. The point I want to make is that in the setting of intellectual property the welfare effects even of second-degree price discrimination are likely often to be positive.¹⁴ Pricing equal to marginal cost may be infeasible if fixed costs are a very large fraction of total costs because in that situation a price equal to marginal cost will not cover total costs unless marginal cost rises steeply with output. In software and other digital markets, as I have already noted, marginal cost is often close to zero, though fixed costs, and therefore total costs, are substantial. In such markets, price discrimination may be more efficient than a uniform price that exceeds

¹³ See Richard A. Posner, *Antitrust Law* 82–84 (Chicago 2d ed 2001).

¹⁴ *Id.*

marginal cost, which would tend to attract inefficient entry, while pricing at marginal cost would not cover total costs. The films involved in the block booking case were of course intellectual property.

It might seem that price discrimination would always have this desirable feature of encouraging investment by increasing firms' profitability. But this is doubtful on several grounds: the higher prices to some (business) customers, which would reduce their incentive to invest; the deflection of resources to industries in which price discrimination is feasible at low cost from industries in which it is not; and the tendency of monopolistic profits to induce inefficient entry.

As with exclusive dealing, bundling can discourage piecemeal entry.¹⁵ Microsoft's Windows operating system contains a number of separate programs, including a browser, and since a single price is charged for the entire system the marginal cost of any of the component programs to the consumer is zero, making it difficult for anyone to compete who is not prepared to supply an entire operating system. Of course there may be alternative ways to make money on a new program without charging for it directly—Netscape demonstrated how with its very lucrative home page. The government's theory in the Microsoft case was that Microsoft wanted to throttle Netscape because the Netscape browser might (in conjunction with Java software) become a substitute for Windows.¹⁶ Throttling Netscape might increase the duration of the Windows monopoly, and we know from the earlier discussion how profitable such prolongation can be when marginal costs are very low, and they are especially low in the case of software. The alternative explanation for the zero price of the Microsoft browser, however, is that zero is the natural price of a browser because the cheaper the browser to the user, the greater the value of internet access and hence of a computer and hence of Windows. In other words, the browser and the operating system are complementary, and what matters to the consumer (putting aside differences among consumers' elasticities of demand that might enable price discrimination) is the joint price rather than how the price is allocated between the complementary items. If everyone who buys a computer wants software that includes a browsing capability, it makes sense to build the browser into the operating system and not charge separately for it, just as auto manufacturers don't charge separately for the wheels on their cars.

¹⁵ See generally Barry Nalebuff, *Bundling as an Entry Barrier*, 119 Q J Econ 159 (2004).

¹⁶ *United States v Microsoft Corp*, 253 F3d 34, 54 (DC Cir 2001) (noting that the focus of the charge was "Microsoft's attempts to suppress [Netscape and Java's] threat to its operating system monopoly").

A plausible example of an anticompetitive use of bundling comes from the airline industry; I mean the curious practice (now waning) of some airlines in charging more for a one-way ticket than for a round-trip ticket.¹⁷ There is some load-balancing benefit to an airline from such a practice, but the penalty seems disproportionate to that benefit, and the size of the penalty may well reflect a desire to increase the cost of piecemeal entry into city pairs; that would make it analytically similar to the *Standard Fashion* case. Suppose a new airline has only one flight a day from A to B and from B to A, while the existing carriers¹⁸ have several. A passenger might want to fly from A to B on the new carrier—the flight is scheduled at a convenient time—yet not want to fly back at the time when the carrier’s sole daily return flight from B to A is scheduled. He would prefer to fly back on a competing carrier. Faced with a choice between paying double and flying back at an inconvenient time, he is quite likely to decide to fly both ways on one of the major airlines. The major carriers lose the business of passengers who are not flying round trip, but on balance may profit from making it difficult for the new carrier to gain a foothold, especially since the marginal cost of airline service is below average cost. Of course, they will be keeping out the new airline only if the newcomer cannot enter the market on the same scale as the existing airlines. But entry on that scale may indeed be unattractive, as it would be considerably riskier, in part because by injecting substantial new capacity into the market it would place enormous pressure on price. It is another case, like *Standard Fashion*, in which economies of scope in distribution may make the use of vertical restraints a rational method of excluding new competition.

A new area of antitrust concern with vertical restraints involves loyalty rebates, and let me end by trying to fit them into the analytical scheme that I have been sketching. The issue is brought into sharp focus by the fascinating case of *LePage’s Inc v 3M (Minnesota Mining and Manufacturing Co)*.¹⁹ To review the essential facts bearing on the rebates issue (there was also an exclusive dealing issue, but I won’t discuss that), the defendant, 3M, manufactures Scotch tape, which until the early 1990s had about 90 percent of the market for transparent tape, assumed to be sufficiently distinct from other binding materials to count as a relevant market for antitrust purposes. In 1980 LePage’s had started making transparent tape for sale under retailers’ private-

¹⁷ This bundling occurs in coach only.

¹⁸ So this is not a case of perpetuating a *monopoly*. But oligopolists engaged in tacit or express collusion also have an incentive to exclude new entry if they can do so at a cost less than the gain from exclusion.

¹⁹ 324 F3d 141 (3d Cir 2003) (en banc), cert denied 124 S Ct 2932 (2004).

brand labels. It made considerable inroads into sales of Scotch tape, and 3M responded by beginning to market its own private-label tape. LePage's suit arose from the fact that 3M offered end-of-year rebates to retailers that bought multiple lines of 3M products, which gave the retailers a strong incentive to buy 3M's private-label transparent tape in preference to LePage's. LePage's market share dropped,²⁰ and eventually (though after the case was decided) it abandoned the market.

What is one to make of such a scenario? The rebates never brought 3M's price, whether for Scotch tape or for private-label tape, below its costs, so LePage's could not maintain its suit as a predatory pricing case. Even if *all* the rebates were allocated to 3M's private-label tape, the price of that tape would still exceed the cost, which gave rise to 3M's argument that LePage's must have been a less efficient producer. Nor was the case (so far as the loyalty rebates were concerned) an exclusive dealing or tying case, since no retailer was required to buy 3M's private-label tape as a condition of being allowed to buy Scotch tape. But there was evidence that because the retailers regarded carrying Scotch tape as indispensable to their business—in much the same way that dry goods stores may have regarded carrying Standard Fashion's dress patterns as indispensable to *their* business—they had a strong incentive to buy their private-label tape as well from 3M, since that would reduce the effective price they were paying for Scotch tape.

It is true that if LePage's private-label costs were the same as 3M's, LePage's could have matched 3M's rebates yet still have broken even, since as I noted if all the rebates were allocated to 3M's private-label tape, 3M would still not have been selling that tape below cost. But it would hardly be feasible for LePage's to match the rebates on a customer-by-customer basis. It would have to make a uniform price cut. But a uniform price cut would confer a windfall on those stores that did not have a strong demand for Scotch tape and so did not receive big rebates from 3M, while probably not being deep enough to match the rebates received by those stores that did have a strong demand for Scotch tape and so earned very large rebates.

If so, the rebates (a form or variant of bundling) can plausibly be understood as a means of exclusion because they imposed greater costs on LePage's than on 3M; the inference of exclusionary conduct is strengthened by the fact that the evidence of economies of joint distribution was weak. Yet the court appears to have assumed that 3M was a more efficient producer of private-label tape than LePage's, and if that is so it is hard to see the point of antitrust intervention; the anti-

²⁰ *LePage's*, 324 F3d at 160–61.

trust concern is with the exclusion of equally or more efficient competitors.²¹ However, 3M may well have been more efficient than LePage's not because it had lower unit costs but merely because there are economies of scale in producing transparent tape; there was in fact evidence of such economies.²² There is a difference from the standpoint of economic welfare between efficiency based on lower labor or materials costs, superior management, better quality, and other firm-specific attributes, and efficiency based on scale, which is attainable by any firm that is able to increase its output to the efficient scale. Economies of scale are a market rather than a firm attribute. To the extent that the loyalty rebates raised LePage's average costs by shrinking its output and thus preventing it from achieving the available economies of scale, this was not a consequence of 3M being a more efficient company in a sense relevant to antitrust policy. 3M may have feared that if LePage's was permitted to get up to speed, powerful retailers such as Office Depot and Wal-Mart would prefer to sell a cheaper private-label tape than to push Scotch tape, and the brand would lose its luster.

An alternative, nonexclusionary explanation for 3M's loyalty rebates is that, as with many other cases of bundling, they were a method of price discrimination. Some retailers doubtless value Scotch tape more highly than private-label tape, and others have the reverse valuation. The rebates provide in effect a single price for a bundle consisting of the two products (I ignore the other products covered by the rebates). The retailers who prefer Scotch tape would see the rebates as a way of being able to buy Scotch tape cheaper, while the retailers who prefer private-label tape would see the rebates as a way of being able to buy private-label tape cheaper.

Still another possibility is that loyalty rebates are intended to induce—loyalty. Another name for that might be low transaction costs and customer inertia, which might be another name for economizing on transaction costs. Once a firm gets accustomed to satisfying its needs for transparent tape by buying from 3M, any newcomer will have to compensate the firm for the risk and (other) costs of switching; that will make new entry less attractive, yet for good economic reasons. Volume discounts are probably best explained on these grounds, and no one supposes them to be suspect under antitrust law.

As the examples I have been discussing illustrate, there are decent theoretical reasons for concern that vertical restraints can have anticompetitive consequences, though probably in only a small minor-

²¹ See Posner, *Antitrust Law* at 194–97 (cited in note 13).

²² *LePage's*, 324 F3d at 161.

ity of cases in which they are employed. Yet even in suspicious cases there invariably are multiple possible economic reasons for a challenged practice—no responsible student of antitrust policy is about to suggest that bundling, discounting, exclusive dealing, volume discounts, customer rebates, or even tying should be presumptively unlawful—and sorting out the reasons in particular cases will often be very difficult. It is easier to conjecture anticompetitive motives for such practices than it is to determine the practices' actual or even (in contrast to cartel cases) likely economic consequences. Another reason to question the appropriateness of aggressive enforcement action against vertical restraints is that, as I have stressed, they are effective exclusionary practices only in situations of fragile monopoly. And in such situations market forces may work as fast as or faster than antitrust litigation to destroy monopoly.

In the end, then, the issue of the proper antitrust stance toward vertical restraints may be procedural and institutional as much as it is analytical: how to enforce antitrust against practices that we are not prepared to treat (as we are in the case of price fixing) as entirely lacking in possible redeeming economic virtues. The rule of reason may be a chimera, placing on courts analytical and evidentiary burdens that they cannot sustain. But that is a topic for another occasion.

